UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

TiVo Inc., a Delaware corporation,	Case No. 2:09-cv-00257-DF
Plaintiff,	**Demand for Jury Trial**
vs.	
Verizon Communications Inc., a Delaware corporation; Verizon Services Corp., a Delaware corporation; Verizon Corporate Resources Group, LLC; and, a Delaware limited liability company,	
Defendants.	

TIVO'S P.R. 4-5(A) OPENING CLAIM CONSTRUCTION BRIEF

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I.   INTRODUCTION

Claim construction in this matter is straightforward. This Court already has construed all of

the necessary terms from TiVo's "TimeWarp Patent," U.S. Patent Nos. 6,233,389 (Ex.1).[1] TiVo's

other asserted patents—U.S. Patent No. 7,529,465 (the "Multiroom Patent") (Ex. 2) and U.S.

Patent No. 7,493,015 (the "Overshoot Correction Patent") (Ex. 3)—build upon core concepts set

forth in the TimeWarp Patent. Both incorporate nearly all of the TimeWarp Patent's specification

and make use of language that is readily understood by one of skill in the art. As a result, most

terms in the Multiroom and the Overshoot Correction Patents do not require construction.

Nevertheless, Verizon[2] follows the same strategy taken by the AT&T Defendants in the

related AT&T case,[3] identifying dozens of terms for construction from the same three patents,

including several terms already construed by this Court. Notwithstanding this common strategy,

Verizon and the AT&T Defendants—despite obvious coordination—cannot agree on whether

certain terms need construction; nor can they agree on what the majority of the terms mean.

Rather, both sets of defendants appear to have approached claim construction largely with the

operation of their own accused systems in mind, purposefully choosing purported synonyms,

incorporating unnecessary or unsupported verbiage, or rewriting the plain language of the claims.

While this is no surprise, defendants' tailored approaches force TiVo to submit two different claim

construction briefs for the same three patents. To simplify this process, however, TiVo attaches

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[1] *TiVo, Inc. v. EchoStar Commc'ns Corp.*, No. 2:04-CV-1-DF, 2005 WL 6225413 (E.D. Tex. Aug. 18, 2005) ("*EchoStar I*") *aff'd* 516 F.3d 1290 (Fed. Cir. 2008) (*EchoStar Appeal*).

[2] "Verizon" refers to Defendants Verizon Communications Inc., Verizon Services Corp., and Verizon Corporate Resources Group, LLC.

[3] "The AT&T Defendants" refer to Defendants AT&T Inc., AT&T Operations, Inc., AT&T Services, Inc., AT&T Video Services, Inc., SBC Internet Services, Inc., Southwester Bell Telephone Company, and Intervenor Microsoft Corporation in *TiVo Inc. v. AT&T Inc., et al.*, (Case No. 2:09-CV-259-DF) ("*TiVo v. AT&T*"). TiVo submitted its Opening Claim Construction Brief in *TiVo v. AT&T* on January 31, 2011. *See* C.A. No. 2:09-CV-259-DF, Dkt. No. 148.

herewith as Exhibit 4 a list of all proffered constructions for the asserted TiVo patents.[4]

II.   RELEVANT CLAIM CONSTRUCTION PRINCIPLES

As this Court is well-versed in the relevant canons of patent claim construction, only those principles most implicated by Verizon's proffered constructions are addressed herein. Foremost among those is the "heavy presumption that claim terms carry their full ordinary and customary meaning." *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003) (quotation omitted). Claim construction is not, however, "an obligatory exercise in redundancy," and a court should not rephrase claim language when the plain language is clear. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997).

Nor should a court limit the plain language of the claims absent an explicit disavowal of claim scope that is "clear and unmistakable." *Schindler Elevator Corp. v. Inventio AG*, 593 F.3d 1275, 1285 (Fed. Cir. 2010) (quotation omitted). This is true not only for statements in the specification and the file history, but also for statements made during reexamination. *Cordis Corp. v. Medtronic Ave, Inc.*, 511 F.3d 1157, 1177 (Fed. Cir. 2008). Notably, no such disavowal occurs when the patentee "merely explain[s], in more explicit terms, what the claims already cover[]." *Id.*

Finally, as regards means-plus-function claims, if a claim lacks the phrase "means for," there is a strong presumption against applying 35 U.S.C. § 112, ¶6. *See Lighting World, Inc. v. Birchwood Lighting, Inc.,* 382 F. 3d 1354, 1358 (Fed. Cir. 2004). This presumption is not readily overcome; it is generally rebutted only when the party advocating means-plus-function treatment established that the claim recites a nonce word, rather than accepted structure. *Id*. Use of broad language, however, does not trigger means-plus-function treatment when that language is understood to describe structure. *Id*.

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[4] TiVo is asserting the same claims in both suits, except that claim 17 of the '465 Patent is not asserted in this case, and claim 4 of the '465 Patent is not asserted in *TiVo v. AT&T*.

III.   THE TIMEWARP PATENT – U.S. PAT. NO. 6,233,389

A.   Overview of the TimeWarp Patent

The TimeWarp Patent describes systems and methods for "multimedia timewarping" that

"allows the user to store selected television broadcast programs while the user is simultaneously

watching or reviewing another program." '389, Abstract; 2:1-3. The patent describes embodiments

that allow a user to view a stored program with trickplay functions—such as reverse, fast forward,

pause, and play. '389, 2:35-38. One of the TimeWarp Patent's many advantages is that it uses "an

easily manipulated, low cost multimedia storage and display system." '389, 1:64-65. Figure 8

illustrates program logic for one embodiment of the TimeWarp Patent:
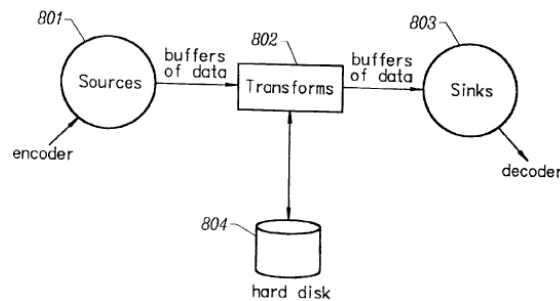
FIG. 8

The interrelationship and functionality of the source, transform, and sink exemplified in

Figure 8 are easily understood by reference to either of the two asserted claims. For example,

Claim 31 recites:

> 31. A process for the simultaneous storage and play back of multimedia
> data, comprising the steps of:
>
> providing a physical data source, wherein said physical data source accepts
> broadcast data from an input device, parses video and audio data from said
> broadcast data, and temporarily stores said video and audio data;
>
> providing a *source object*, wherein said source object extracts video and audio
> data from said physical data source;
>
> providing a *transform object*, wherein said transform object stores and
> retrieves data streams onto a storage device;

wherein said *source object obtains a buffer from said transform object*, said
source object converts video data into data streams and fills said buffer
with said streams;

wherein said *source object is automatically flow controlled by said transform
object*;

providing a *sink object, wherein said sink object obtains data stream buffers
from said transform object* and outputs said streams to a video and audio
decoder;

wherein said decoder converts said streams into display signals and sends said
signals to a display;

wherein said *sink object is automatically flow controlled by said transform
object*;

providing a control object, wherein said control object receives commands
from a user, said commands control the flow of the broadcast data through
the system; and

wherein said control object sends flow command events to said source,
transform, and sink objects.

B.   Prosecution history of the TimeWarp Patent

Claims 31 and 61 of the TimeWarp Patent were twice confirmed during reexaminations

without amendment. During the second reexamination, TiVo provided remarks and declarations to

correct the examiner's analyses of the prior art references. But TiVo never altered the specification

or revised the meaning of any claim terms. Instead, TiVo's submissions were completely consistent

with this Court's existing constructions and, as the examiner recognized, the patent's claims and

specification Ex. 5, p. 2 (finding that TiVo's definitions and clarifications were made "*in light of

the understanding of the terms provided in the '389 specification*" and interpreting the claims "in

light of Patent owner's arguments, *and as expressly disclosed in the '389 specification*.")

(emphasis added).

Nevertheless, Verizon has proffered constructions that ignore the Court's existing

constructions and derive primarily from multiple, unsupported modifications to TiVo's statements

in the second reexamination. That proceeding focused on a proposed combination of two prior art references, U.S. Patent Nos. 6,018,612 ("Thomason") and 5,949,948 ("Krause"). The primary reference, Thomason, disclosed an arrangement for storing and retrieving an information signal in a main memory that used a combined single buffer memory for "input" and "output," which the examiner had associated with the '389 Patent's source and sink objects, respectively. Ex. 6, p. 6-11. Relevant to Verizon's claim construction arguments here, TiVo disputed the examiner's original theory that Thomason's buffer management scheme met the claim recitation that a transform object automatically flow controls such source and sink objects. *Id.*

In responding to the examiner, TiVo remarked that the transform object "is centrally disposed in the sense that it automatically flow controls both the source object and the sink object." Ex. 6 at 6. This statement parrots the claims themselves. *See, e.g.*, '389, Cl. 31 ("source object is automatically flow controlled by said transform object" … "sink object is automatically flow controlled by said transform object"). For shorthand, TiVo referred to these explicitly recited architectural limitations as the "centralized transform object." But TiVo never indicated—let alone stated—that the term "centralized" is a new limitation on the transform object. Ex. 6 at 7.

To give further context to its arguments, TiVo remarked that "[s]tated another way, the same transform object automatically flow controls both the source object on the input side as well as the sink object on the output side." Ex. 6 at 6. TiVo further used this "input/output" shorthand to refer to, but not re-define or limit, the source object (which accepts data from an "input" device) and sink object (which "outputs" streams to a decoder). *See Id.*; Ex. 7, ¶¶ 4, 10; '389, Cls. 31 & 61. TiVo did not import any new "input side" or "output side" limitations into the claims.

TiVo also remarked that the passive buffer activity in the Examiner's proposed modification to Thomason is not "automatic flow control." Instead,

> One of skill in the art would understand that the recited centralized transform object intelligently manages buffers or the manipulation of the video and audio data so as to facilitate the system's ability to handle asymmetric memory demands of the source and sink objects. The specification explains that the "pipeline," which includes the recited source/transform/source [sic: sink] object architecture, is "self-regulating" with respect to the flow of data down the pipeline.

Ex. 6 at 8; *see also* Ex. 7 at 3 ¶ 11.

As discussed below, Verizon would modify TiVo's statements during the reexam to import self-servingly altered language as additional limitations on the claims. But TiVo's remarks, such as the phrase "intelligently manages buffers," simply explain in more explicit terms the limitations already recited in the claims. *See, e.g.,*'389, Cl. 31 ("source object **obtains a buffer** from said transform object; . . . sink object **obtains data stream buffers** from said transform object"). Similarly, the references to the "manipulation of the video and audio data," "asymmetric memory demands of the source and sink objects," and "self-regulating" architecture are also merely descriptions of the express claim language and this Court's existing constructions. *See, e.g.,*'389, Cl. 31 ("source object **extracts video and audio data** … **converts video data into data streams** and fills said buffer with said streams; . . . sink object obtains data stream buffers from said transform object and **outputs said streams to a video and audio decoder**"); *EchoStar I,* 2005 WL 6225413, at *12 ("The claim phrase as a whole, 'obtains a buffer' is therefore construed as **'obtains memory** where data can be temporarily **stored for transfer.'**") (emphasis added); *Id.* ("The Court agrees with TiVo's position and defines 'automatically flow controlled' as **'self-regulated'** due to its clear definition in the specification. *See* '389 patent at col. 8:48-49") (emphasis added). In short, TiVo "merely explained, in more explicit terms" the claimed inventions to address the examiner's attempt to apply the transform object to a modified Thomason reference. *Cordis*, 511 F.3d at 1177.

TiVo's submissions to the PTO also relied on this Court's existing construction of "object." *See, e.g.,* Ex. 7 at 3 ¶ 12 ("The word 'object' which is used as part of the claim term 'transform

object' has a well known meaning in computer science, being a **collection of data and operations**

… ."); *EchoStar I*, 2005 WL 6225413, at *13 ("the Court construes 'object' as 'a **collection of**

data and operations.'"). TiVo also addressed words within this construction:

> The term "data" would thus be understood in this context to refer to a set of variable
> values or state information that reflects the state or progress of the operations. The
> term "operations" in this context would be understood [to] refer to operations that
> manipulate the set of values or state information. Lastly, the term "collection"
> would be understood in this context to refer to a set of functionally interrelated data
> and operations, as explained in the specification.
>
> Consistent with the individual meanings of the terms "collection," "operation" and
> "data," the term "object" in this context would in my opinion be understood by
> those skilled in the art to refer to a functionally interrelated set of state information
> typically a set of variable values which include information concerning the state or
> progress of the operations that relate to the state information.

Ex. 6 at 4 ¶¶ 16-17. TiVo's remarks during the reexamination were not accompanied by any

amendment to the claims. The remarks were confined to discussing, in more explicit terms, what

the claims already covered and what one of ordinary skill in the art would understand in

accordance with this Court's thorough analysis in the *EchoStar* litigation.

C.   The Court should continue to apply its existing constructions.

This Court's existing constructions for the TimeWarp Patent are both correct as a matter of

law and sufficiently clear for a jury to apply. Nevertheless, Verizon abandons the Court's

constructions, proffering constructions that serve only to introduce additional terms into the claims

and confuse the jury. Verizon's proposed redrafting of the Court's construction should be rejected.

1.   "object," "sink object," "control object," and "source object"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
object	a collection of data and operations This same construction of "object" applies to the terms "transform object," "sink object," and "control object."	a collection of data and operations, wherein "data" means "a set of variable values or state information that reflects the state of progress of the operations," "operations" means "operations that manipulate the set of values or state information," and "collection" means "a set of functionally interrelated data and operations as defined by the programmer"
sink object	a collection of data and operations that (1) obtains data stream buffers [memory where data can be temporarily stored for transfer] from a transform object and (2) outputs the streams to a video and audio decoder	object that (1) obtains data stream buffers from a transform object and (2) outputs the streams to a video and audio decoder
control object	a collection of data and operations that receives commands from a user that control the flow of broadcast data	object that receives commands from a user that control the flow of broadcast data
source object	a collection of data and operations that (1) extracts video and audio data from a physical data source, (2) obtains a buffer [memory where data can be temporarily stored for transfer] from a transform object, (3) converts video data into data streams, and (4) fills the buffer [memory where data can be temporarily stored for transfer] with the streams	object that (1) extracts video and audio data from a physical data source, (2) obtains a buffer from a transform object, (3) converts video data into data streams, and (4) fills the buffer with the streams

TiVo adopts, verbatim, this Court's existing constructions for "object," "sink object,"

"control object," and "source object." Properly construed "[i]n light of the claims and

specification," the term "object" means "a collection of data and operations," and this same

construction of "object" applies to the terms "sink object," "control object," and "source object."

EchoStar I, 2005 WL 6225413 at *13–14.[5] (rejecting EchoStar's argument that "'object' means 'an

item written with an object-oriented computer programming method (for example, in C++) that

encapsulates data and the procedures necessary to operate on that data and can inherit properties

from a class or another object.'"). These constructions have been applied by a jury and were

affirmed by the Federal Circuit. *EchoStar Appeal*, 516 F.3d at 1306-07.

While Verizon agrees that "object" should be construed as "a collection of data and

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[5] *See also, e.g., EchoStar I*, 2005 WL 6225413 at *14 ("The Court finds that persons of ordinary skill in the art readily understand the meaning of 'control object' upon a reading of the claim language and its context in the specification."); *Id.* at *13 (same for "source object").

operations," Verizon now seeks to further construe this construction by defining the terms

'collection,' 'data,' and 'operations,' adding unnecessary and unsupported verbiage to the Court's

construction and transforming it from "a collection of data and operations" into:

> a ~~collection~~ set of functionally interrelated data and operations as defined by the programmer of ~~data~~ a set of variable values or state information that reflects the state of progress of the operations and ~~operations~~ operations that manipulate the set of values or state information.

The result is an unwieldy and confusing definition for "object" that, when inserted into the Court's

constructions of "source object," "sink object," and "control object," provides no meaningful

guidance to a jury and therefore should be rejected. *See Netscape Commc'ns Corp. v. Valueclick,*

Inc., 684 F. Supp. 2d 678, 693-94 (E.D. Va. 2009) (holding that "claim construction must aid the

jury in resolving the parties' dispute").

Worse yet, Verizon manufactures the unsupported limitation that a collection is functionally

interrelated data and operations "***as defined by the programmer***" (whatever that means).This

language is found nowhere in the intrinsic record, has no meaning in the context of the claims, and

"would require further construction" before a jury could understand the limit of its scope.

Netscape, 684 F. Supp. 2d at 693-94. Verizon's proposed construction provides no meaningful

guidance for the jury and "contribute[s] nothing but meaningless verbiage to the definition of the

claimed invention." *Harris Corp. v. IXYS Corp.*, 114 F.3d 1149, 1152-53 (Fed. Cir. 1997)

In contrast with Verizon's considerable contortions of the reexam record, TiVo's actual

discussion of the term "object" during the reexam is consistent with this Court's previous

construction of that term as "a collection of data and operations," as discussed in Section III.B,

supra. TiVo did not provide a new definition. Nor did TiVo provide a "clear and unmistakable"

disavowal of claim scope, *Cordis*, 511 5.3d at 1177, a fact evidenced by Verizon's refusal to adopt

TiVo's actual remarks verbatim. Accordingly, TiVo's remarks regarding "data," "operations," and

"collection" do not justify a departure from the existing construction to create still further

instructions and additional complexity for the jury. *Semiconductor Energy Lab. Co., Ltd. v. Chi*

Mei Optoelectronics Corp., 2006 U.S. Dist. LEXIS 13243 (N.D. Cal. Mar. 24, 2006) ("Adding to

or rephrasing the claim language often introduces more problems than it solves.").

2.   "obtains data stream buffers"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
obtains data stream buffers	obtains data stream buffers [memory where data can be temporarily stored for transfer]	obtains buffers containing data streams

As this Court explained in the *EchoStar* litigation, when declining Echostar's request to

rephrase it, "the claim phrase 'obtains data stream buffers' has a plain meaning readily understood

by persons of ordinary skill in the art." *EchoStar I* at *14. Other than incorporating its construction

of "buffer," the Court left this phrase unchanged, construing it as "obtains data stream buffers

[memory where data can be temporarily stored for transfer]." *Id.* This construction was ably

applied by a jury in the *Echostar* litigation and does not need further construction here.

3.   "transform object," "automatically flow controlled," "wherein said source object is automatically flow controlled by said transform object," and "wherein said sink object is automatically flow controlled by said transform object"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
transform object (JCCS item 7)	a collection of data and operations that transforms the form of data upon which it operates	a single, centralized object that transforms the form of data upon which it operates, and that controls the source and sink objects by allocating buffers between them to intelligently manage the asymmetric data-movement demands of the input side and the output side
automatically flow controlled	self-regulated	see "Transform Object" Construction
wherein said source object is automatically flow controlled by said transform object	**No further construction necessary** due to the Court's prior constructions of "source object" (item 5), "automatically flow controlled" (item 19) and "transform object" (item 7).	Construe as in item 7, with surrounding claim language
wherein said sink object is automatically flow controlled by said transform object	**No further construction necessary** due to the Court's prior constructions of "transform object" (item 7), "automatically flow controlled" (item 19), and "sink object" (item 14).	Construe as in item 7, with surrounding claim language

TiVo adopts, verbatim, this Court's existing constructions. *See EchoStar I*, 2005 WL 6225413 at *12, *14 ("The Court agrees with TiVo's position and defines 'automatically flow controlled' as 'self-regulated'"). These constructions follow from the "clear definition in the specification," which states that "[t]o obtain the buffer, the source object 901 asks the down stream object in his pipeline for a buffer (allocEmptyBuf). The source object 901 is blocked until there is sufficient memory. ***This means that the pipeline is self-regulating; it has automatic flow control****." EchoStar I*, 2005 WL 6225413 at *12; '389 Pat. at 8:43-49 (emphasis added).[6]

On the other hand, Verizon crafts opportunistic new constructions, ignoring the Court's prior analysis of "transform object" and "automatically flow controlled." Verizon again purports to rely on TiVo's statements in the second reexamination. But as with Verizon's construction for the term "object," Verizon's arguments are again based on significant and unsupported revisions to TiVo's actual statements during the reexamination:

TiVo's Remarks in 2nd Reexamination	Verizon's Proposed Language
"the recited centralized transform object intelligently manages buffers or the manipulation of the video and audio data so as to facilitate the system's ability to handle asymmetric memory demands of the source and sink objects." Ex. 6 at 8.	"transform object" means "a **single**, centralized object that transforms the form of data upon which it operates, and that **controls the source and sink objects by allocating** buffers **between** them to intelligently manage the asymmetric **data-movement demands of the input side and the output side**"

Fatal to Verizon's proposed construction is the fact that TiVo never recited or described a "single" transform object and never asserted that it must "allocate[e] buffers between" the source and sink. This is Verizon's language, not TiVo's. As such, TiVo did not make any disavowal of claim scope, let alone a "clear and unambiguous" one. *Storage Tech. Corp. v. Cisco Sys., Inc.*, 329 F.3d 823, 833 (Fed. Cir. 2003).

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[6] These constructions are also consistent with the ordinary meaning of the words "automatic" and "control." "Control" means to regulate. *American Heritage Dictionary of the English Language* 400 (4th ed. 2000) (Ex. 8); *Webster's Third New Int'l Dictionary* 496 (2002) (Ex. 9). "Automatic" means self-regulating. *American Heritage Dictionary* 122; *Webster's Third* 148.

To reiterate, TiVo's statements in the second reexamination followed this Court's existing constructions and only explained what the claims already covered within the technical context of the examiner's particular combination of cited prior art. *See* Section III.B, *supra*. Regarding the "transform object," TiVo stated that it "intelligently manages *buffers*." Ex. 6 at 8. TiVo did not state—as Verizon contends—that the transform object "intelligently manage *the asymmetric data-movement demands*." TiVo's statement that the transform object intelligently manages buffers is nothing more than a shorthand for the claim language, which states that the "source object obtains a buffer from said transform object" and the "sink object obtains data stream buffers from said transform object." '389, Cls. 31, 61. Contrary to Verizon's constructions, TiVo's actual remarks in the reexam were that the "*system's* [not the transform object's] ability to *handle* [not manage] asymmetric memory demands" is a benefit facilitated by this explicitly claimed buffer management. Ex. 6 at 8.

TiVo's remarks also addressed "asymmetric *memory*" demands, not "asymmetric *data-movement* demands," as proposed by Verizon. And again, this is not definitional. It simply describes a benefit that can be derived from the recited claim language, which discusses objects that "obtain" and "fill" buffers, *i.e.*, "memory" under the Court's construction. Likewise, nothing in TiVo's statement limits the claimed transform object to a "single" object that "allocates" buffers "between" the source and sink objects—those proposed additions are just Verizon's attempt to write previously non-existent limitations into the claims.

During reexamination, TiVo referred to a "centralized transform object" and "input" and "output" sides. But as discussed in Section III.B, *supra*, TiVo explicitly stated that the adjective "centralized" was just a shorthand for the explicit language in the claims reciting that both the source and sink objects are automatically flow controlled by the same ("said") transform object:

> The recited transform object is thus centrally disposed in the sense that it automatically flow controls both the source object and the sink object. Stated another way, the same transform object automatically flow controls both the source object on the input side as well as the sink object on the output side. ***Hereinafter these recited architectural limitations are collectively referred to as the "centralized transform object."***

Ex. 6 at 6-7 (emphasis added). "Centralized" is therefore not a new limitation and it should not be added in place of the plain claim language for which it would make a less precise substitute.

Similarly, TiVo's reference to "input" and "output" sides did not add new limitations to the claims. These terms arose in the context of the Examiner's proposed modifications to Thomason's "input" and "output" buffers. Throughout the reexamination, TiVo used "input" and "output" sides as shorthand for the explicitly recited functionality in the "source" and "sink" objects—these were not definitional statements or new limitations beyond the claim language. *See* Section III.B, *supra*.

In short, Verizon's myriad requests to inject unnecessary additional language into the claims or existing constructions is inappropriate because they fail to clarify claim scope or otherwise aid the jury in better understanding the claimed invention. *See Funai Elec. Co., Ltd. v. Daewoo Electronics Corp.*, 616 F.3d 1357, 1366 (Fed. Cir. 2010) (emphasizing that the criterion in evaluating whether a claim construction is appropriate is whether the explanation "aids the court and the jury in understanding the term as it is used in the claimed invention."). This Court should reject Verizon's manufactured limitations and continue to apply the existing constructions.

D.   Verizon's additional terms do not require construction.

Beyond the eleven terms that the Court construed previously, Verizon proposes constructions for seven additional terms and phrases. Most of these involve some modification or combination of the eleven terms this Court already construed. The remaining terms are, as history has demonstrated, straightforward and do not require construction. TiVo offers appropriate constructions, however, should the Court find express construction of some terms necessary. Three

of these new terms were addressed above, because they are nearly identical to terms this Court

already construed.

1.   Verizon's new limitation on "temporarily stores"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
temporarily stores said video and audio data	**No construction necessary**, alternatively, "temporarily places or holds the video and audio data."	the physical data source places the video and audio data into memory temporarily

The claim phrase "temporarily stores said video and audio data" is straightforward and

requires no construction. This conclusion follows directly from the Court's existing construction of

"buffer" as "memory where data can be *temporarily stored* for transfer." *EchoStar I* at *12

(emphasis added). As the concept of temporarily storing data is readily understood by one of skill

in the art, the phrase "temporarily stores said video and audio data" need not be construed.

Despite the plain language of the claim, Verizon tries to narrow the claim to require that the

physical data source be responsible for "plac[ing] the video and audio data into memory." Yet

nothing in the plain language of the claim requires that the physical data source—as opposed to

some other component—be responsible for "placing" the data into memory. Indeed, the ordinary

meaning of "store" includes both holding data and placing data into memory. Ex. 10, *Encarta

World Dictionary* 1763 (1999) (defining "store" as "HOLD DATA" as well as "to enter or save

data . . . into a computer memory"); *see also* '389, 8:43-44 ("The source object 901 takes data out

of a physical data source. . ."). If the Court finds further construction necessary, however, this

phrase should be construed as "temporarily places or holds the video and audio data." This

construction is consistent with the plain meaning of "stores" and the language of the claims and

specification.

2.   Verizon's new limitations on the "source object"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
wherein said source object extracts video and audio data from said physical data source	**No construction necessary**, alternatively, "the source object gets video and audio data from said physical data source."	the source object takes video and audio data out of the physical data source
said source object converts video data into data streams and fills said buffer with said streams	**No further construction necessary** due to the Court's prior constructions of "source object" (item 5) and "buffer" (item 10).	said source object converts the video data it has taken from the physical data source into video data streams and fills said buffer with said streams

The parties proposed individual constructions for the terms "source object," "physical data source," and "buffer." The remaining words in these phrases are straightforward and do not need further construction. Verizon, however, wants to rephrase the claim so that that the source object "takes" data "out of" the physical data source (i.e. *removes* the data). But the claim does not require this. Indeed, nothing prevents the source object from extracting data by, for example, obtaining or deriving a copy of the data. Verizon's construction should be rejected.

If the Court finds express construction of these entire claim clauses is necessary, however, the appropriate construction is that "the source object gets video and audio data from said physical data source." *See, e.g.,* Ex. 8, *American Heritage Dictionary* 629 ("Extract" means "to derive or obtain (information, for example) from a source.").

3.   Verizon's new limitation on the "transform object"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
wherein said transform object stores and retrieves data streams onto a storage device	**No further construction necessary** due to the Court's prior construction of "transform object" (item 7).	the transform object reads and writes data streams to and from a non-temporary storage device

This Court previously construed the term "transform object" as "a collection of data and operations that transforms the form of data upon which it operates." *EchoStar I*, 2005 WL 6225413, at *14. This additional phrase recites a basic function of the transform object—it "stores and retrieves data streams onto a storage device." While Verizon has not explained why it feels this straightforward phrase needs to be construed, it is worth reiterating that "claim construction is not

an obligatory exercise in redundancy." *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997); *see also Motorola, Inc. v. VTech Commc'ns, Inc*., No. 5:07-CV-171, 2009 U.S. Dist. LEXIS 59226, *21 (E.D. Tex. July 6, 2009) ("[W]here additional language may be unduly limiting, confusing or redundant, it is in the court's power to determine that no construction is necessary."). Verizon's proposed redrafting of the claim adds the term "non-temporary" and provides no better explanation of the terms "stores and retrieves." Thus, it should be rejected.

4. "control the flow of the broadcast data through the system"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
control the flow of the broadcast data through the system	**No construction necessary**, alternatively, "control the flow of the broadcast data within the system"	control the transmission of the broadcast data from the physical data source to the display

The phrase "control the flow of the broadcast data through the system" is not remarkable. It has been applied by prior experts and a jury and is readily understood when read in the context of the claim. The full limitation, with the disputed phrase italicized, recites "a control object, wherein said control object receives commands from a user, said commands *control the flow of the broadcast data through the system*." '389, 15:11-13, 18:26-28 (emphasis added). The concept of a DVR receiving commands from a user is readily apparent: a user issues commands, such as play, pause, rewind, record, etc., which are received by the device and ultimately control the flow of broadcast data, causing it to play, pause, rewind, record, etc.

Verizon's proposed construction ("control the transmission of the broadcast data from the physical data source to the display") is overly narrow and inconsistent with the description of the control object in the specification. As an initial matter, Verizon's construction improperly rewrites the claims by substituting the term "flow" with the narrower term "transmission." This term is not synonymous with "flow," nor is it found anywhere within the claims or relevant portions of the specification. Thus "transmission" does not provide the jury with a more accurate—let alone

better—understanding of the claim language. *See Funai Elec. Co., Ltd. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1366 (Fed. Cir. 2010) (emphasizing that the criterion in evaluating whether a claim construction is appropriate is whether the explanation "aids the court and the jury in understanding the term as it is used in the claimed invention").

Further, to the extent it is understood, Verizon's proposal appears to improperly require that every user command control the *entire* data flow through the pipeline, *i.e.* "from the physical data source to the display." This contravenes the specification's description of the function of the control object, which describes an exemplary embodiment issuing flow control commands that, at times, affect data flow through only portions of the system, rather than the entire pipeline from beginning to end. Specifically, it states that the "control object 917 accepts commands from the user and sends events into the pipeline to control what the pipeline is doing. For example . . . the user presses pause and the control object 917 sends an event to the sink 903, that tells it pause. The sink 903 stops asking for new buffers." '389, 9:22-27. In this example, the "pause" command affects the data flow at one point in the pipeline, the point where the sink requests new buffers.[7] Upstream data flow, for example, from the physical data source to the point where the sink requests new buffers, need not be affected. Verizon's proposed construction, which requires all commands to affect the entire pipeline "from the physical data source to the display," would improperly exclude a preferred embodiment and should be rejected. *See MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007) ("[A] claim interpretation that excludes the preferred embodiment from the scope of the claim is rarely, if ever, correct.").

If construction is found necessary, this phrase should be construed as "control the flow of

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[7] Additional commands are described as affecting only portions of the pipeline, rather than the entire pipeline "from the physical data source to the display," as proffered by Verizon. For example, the "sink 903 starts taking buffers out again when it receives another event that tells it to play," and "[w]hen the fast forward key is pressed, the control object 917 sends an event to the transform 902, that tells it to move forward two seconds." '389, 9:28-30; 33-35.

the broadcast data within the system." This interpretation comports with the claim language and

the disclosure in the specification that commands may affect individual portions of the pipeline,

such as the source, transform, or sink. Verizon's proposal that all possible commands must affect

the entire pipeline from beginning to end is not correct.

5.   **"wherein said control object sends flow command events to said source, transform, and sink objects"**

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
wherein said control object sends flow command events to said source, transform, and sink objects	**No further construction necessary** due to the Court's prior constructions of "source object" (item 5), "transform object" (item 7), "sink object" (item 14), and "control object" (item 16). Alternatively, "the control object sends information relating to a change of condition in the flow of the broadcast data to the source, transform and sink objects"	the control object sends commands to the source, transform, and sink objects that control the flow of the broadcast data within the system

This Court has previously construed the terms "control object," "source object," "transform

object," and "sink object." The claim itself provides that the control object "receives commands

from a user, said commands control the flow of the broadcast data through the system." In view of

the Court's existing constructions, this remaining phrase is straightforward and does not require

further construction.

Verizon's strategy of asking to construe the entire clause would wrongly rewrite the claims

in two respects. First, where the claim requires only that the control object send "flow *command*

events," Verizon proffers a control object that sends "*commands*." Verizon therefore substitutes

"commands" for "flow command events," which is not supported by the record. *See, e.g.,* '389,

9:22-23 ("The control object 917 accepts commands from the user and sends events into the

pipeline . . ."); *see also* Ex.11, *IEEE 100: The Authoritative Dictionary of IEEE Standards Terms*

398 (7th ed. 2000) ("IEEE 100 Dictionary") ("event" means "any change in the conditions or

performance of interest").

In addition, Verizon asserts that the command events "control the flow of broadcast data

through the system." Verizon has provided no basis, however, for writing this language into the limitation. Indeed, identical language is found in the immediately preceeding limitation of the same claim, thus militating against Verizon's redundant construction. *See Braun Corp. v. Vantage Mobility Int'l, LLC*, 608 F. Supp. 2d 1036, 1047 (N.D. Ind. 2009) (rejecting a proposed construction where "the inclusion of both terms within the same claim would be redundant"). If further construed, this phrase should be interpreted in accordance with its ordinary meaning of "event" and construed as "the control object sends information relating to a change of condition in the flow of the broadcast data to the source, transform, and sink objects."

IV.   THE MULTIROOM PATENT – U.S. PAT. NO. 7,529,465

A.   Overview of the Multiroom Patent

The Multiroom Patent builds on the technology of the TimeWarp Patent by providing additional control over the way users view television programs. The Multiroom Patent includes a digital video recorder (DVR), which "allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program." '465, 2:7-10. The DVR also automatically generates "video segment identifying information" that facilitates simultaneous retrieval of video segments from both multimedia programs that were previously recorded and programs whose storage is in progress. '465, Cls. 1, 10. The claimed techniques for retrieving video segments for playback further permit users to control playback rate and direction for each program individually and simultaneously. *Id.* Thus, for example, one person could watch a previously recorded movie in one room, fast forwarding through the opening credits, while a second person watches a live football game in another room, pausing the game to answer the telephone.

Here, TiVo asserts five claims from the Multiroom Patent: claims 1, 4, 8, 10, and 13. Independent claims 1 and 10 relate to a DVR as described above. Dependent claim 8 relates to

"synchronizing video and audio components for proper playback" in a DVR that has a plurality of

input signal tuners, each tuned to a specific multimedia program. '465, Cl. 8.[8] Dependent claim 13

relates to a DVR "wherein a user controls playback rate and direction of a multimedia program

through a remote control." '465, Cl. 13.

> ### B.   Where construction is appropriate, TiVo's proposals should be adopted.

> #### 1.   "digital video recorder"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
digital video recorder	a device that allows the user to store multimedia programs in digital form	a device capable of recording digital video

The term "digital video recorder" means "a device that allows the user to store multimedia

programs in digital form." This construction flows directly from the use of the term in asserted

claims 1 and 10. Claim 1 is for "[a] process for a digital video recorder comprising the steps of:

storing a plurality of multimedia programs in digital form on at least one storage device," while

claim 10 is for "[a]n apparatus for a digital video recorder, comprising: a module for ***storing a***

plurality of multimedia programs in digital form on at least one storage device." '465, 12:28-31,

13:20-22 (emphasis added). The written description and claims make clear that an object of the

claimed invention is for the digital video recorder to allow a *user* to store or record, and

simultaneously play back, multimedia programs. '465, 2:8-10 ("[T]he invention allows the user to

store selected television broadcast programs"), 3:30-33 ("The invention additionally provides the

user with the ability to store selected television broadcast programs"). TiVo requests that the Court

adopt its construction.

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[8] The PTO issued a Certificate of Correction addressing errors in claim 8, which, after correction, depends from claim 7. For convenience, the complete corrected language is set out in Exhibit 12.

2. "video segment"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
video segment	**No construction necessary,** alternatively, "a portion of video from a multimedia program."	all or part of a multimedia program comprising video

The term "video segment" appears repeatedly in claims 1 and 10 in the '465 Patent. For example, the claims recite "simultaneously retrieving for play back a *video segment from* at least one of said selected previously recorded *multimedia program(s)* and *a video segment from a multimedia program* whose storage is in progress." The plain claim language reflects that a video segment is a portion of video from a multimedia program. *See American Heritage Dictionary* 1577 ("segment" means "[a]ny of the parts into which something can be divided."). Verizon's proposed construction—"*all* or part of a multimedia program"—should be rejected because it writes the word "segment" out of the claim. *See Becton, Dickinson & Co. v. Tyco Healthcare Group*, 616 F.3d 1249, 1257 (Fed. Cir. 2010) (rejecting claim construction that would render claim language superfluous).

3. "to cause delivery of selected video segments to an output subsystem"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
to cause delivery of selected video segments to an output subsystem	**No construction necessary,** alternatively, "to cause delivery of selected video segments to a subsystem in the digital video recorder, wherein the subsystem produces output signals."	to cause delivery of selected video segments to a subsystem within the DVR capable of simultaneously producing television signals for the stored program and the program whose storage is in progress

Independent claims 1 and 10 include two primary elements: (1) "storing a plurality of multimedia programs . . . on at least one storage device" and (2) "simultaneously retrieving for playback" a video segment from a previously recorded program and a video segment from a program whose storage is in progress. '465, 12:30-31, 12:34-37, 13:21-22, 13:25-29. The "retrieving" element includes "delivery of selected video segments to an output subsystem." '465, 12:44-45, 13:36-37. The concept of retrieving the video segments from the storage device and

delivering them to an output subsystem is plainly expressed by the language of the disputed phrase, and further construction is not needed.

Verizon proffers a long and tortured construction that differs markedly from the plain language of the limitation. Verizon, in effect, redefines the word "output subsystem" to mean "a subsystem within the DVR capable of *simultaneously* producing *television signals* for the stored program and the program whose storage is in progress." But Claims 1 and 10 do not require that the "subsystem" be capable of *simultaneously* producing *television signals* (whatever Verizon defines "television signals" to be). Notwithstanding, Verizon writes "television signals" into the claim and improperly imports the word "simultaneously" from elsewhere in claims 1 and 10, where it is used as part of the phrase "simultaneously retrieving for playback." *See Stambler v. Merrill Lynch & Co.*, No. 2:08-CV-462-DF-CE, 2010 U.S. Dist. Lexis 100657, *15 (E.D. Tex. Sept. 24, 2010) (rejecting "attempt[] to collapse limitations from elsewhere in the claims").

To the extent Verizon equates "television signals" with "display signals," Verizon's construction must be rejected because it improperly imports the only limitation added to the output subsystem by dependant claims 2 and 11 into independent claims 1 and 10. *See, e.g.*, '465, Cl. 2 ("The process of claim 1, where said output subsystem converts said at least one of said selected multimedia program(s) and said multimedia program whose storage is in process into display output signals."). As the Federal Circuit has stressed, "the presence of a dependent claim that adds a particular limitation" indicates "that the limitation in question is not present in the independent claim." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005). Thus, were the Court to conclude that this phrase requires construction, it should be construed as "to cause delivery of selected video segments to a subsystem in the digital video recorder, wherein the subsystem produces output signals." *See* Ex. 8, *American Heritage Dictionary* 1250 ("Output" means "[t]he

information produced by a program or process from a specific input"). This is the natural reading

of the claim language, and avoids the unnecessary limitations proposed by Verizon.

4.   "allows . . . to be controlled individually" and "any of"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
allows playback rate and direction of each multimedia program **to be controlled individually** and simultaneously to perform **any of**: fast forward, rewind, frame step, pause, and play functions	**No construction necessary,** alternatively, "permits playback rate and direction of each multimedia program to be controlled individually and simultaneously to do one or more of the following functions: fast forward, rewind, frame step, pause, or play."	is capable of changing the playback rate and direction of each multimedia program, such that each program can be independently and simultaneously controlled to execute fast-forward, rewind, frame-step, pause, and play modes

Verizon here again would rewrite the plain claim language to insert terms more to its liking.

For example, nothing in the claims states that the process or apparatus must itself be "capable of

changing" playback rate and direction, only that it "*allows* playback rate and direction … to be

controlled." Further, Verizon's construction reads the words "any of" out of the claim entirely and

instead requires that the invention "execute fast-forward, rewind, frame-step, pause, *and* play

modes" rather than "any of" these recited functions. Claim construction is not an exercise in

substituting words that an accused infringer may wish the inventors had used in place of the words

they actually did. This phrase needs no further construction, but to the extent the Court finds

otherwise it should be construed in accordance with its plain meaning rather than altered wholesale

as Verizon suggests. *See, e.g.,* Ex. 8*, American Heritage Dictionary*, 81 ("Any" means "[o]ne,

some, every, or all without specification.").

5.   A "module" is not solely hardware

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
a module for storing a plurality of multimedia programs in digital form on at least one storage device	**No construction necessary**, alternatively, "a module for storing a plurality of multimedia programs in digital form on at least one storage device, wherein a module means a portion of a device and/or a software program that carries out a specific function and may be used alone or combined with other modules of the same device or program."	electronic circuitry in the DVR for storing a plurality of multimedia programs in digital form on at least one storage device

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
a module for simultaneously retrieving for play back a video segment from at least one of said selected previously recorded multimedia program(s) and a video segment from a multimedia program whose storage is in progress	**No construction necessary**, alternatively, "a module for simultaneously retrieving for play back a video segment from at least one of said selected previously recorded multimedia program(s) and a video segment from a multimedia program whose storage is in progress, wherein a module means a portion of a device and/or a software program that carries out a specific function and may be used alone or combined with other modules of the same device or program."	electronic circuitry in the DVR for simultaneously retrieving for play back a video segment from a previously recorded multimedia program

The term "module" appears in both the '465 and the '015 Patents. This word does not require construction because its meaning is readily understood. To persons of skill in the art, the term "module" refers to a class of hardware and/or software components that carry out specific functions. *See, e.g., Stanacard, LLC v. Rebtel Networks, AB*, 680 F. Supp. 2d 483, 500 (S.D.N.Y. 2010); *C2 Communic'ns v. AT&T, Inc.*, No. 2:06-CV-241, 2008 WL 2462951, *11 (E.D. Tex. June 13, 2008); s*ee also American Heritage Dictionary of the English Language* at 1131 (4th ed. 2000) (one meaning of module is "[a] portion of a program that carries out a specific function and may be used alone or combined with other modules of the same program").

The parties agree that a module can include computer hardware, *i.e.* "electronic circuitry" in the words of Verizon's proposed construction. But nothing in the specification supports Verizon's position that "module" is limited *solely* to electronic circuitry. To the contrary, consistent with the ordinary meaning of the term, the specification indicates that the disclosed modules can be a combination of software and/or hardware. For example, Figure 8 provides a high level view of the program logic, and shows that the source, transform, and sink objects are used to store data to, and retrieve it from, the hard drive. Figure 9 shows portions of the corresponding class hierarchy for the program logic in an embodiment that uses C++ software programming to carry out the respective functions.[9] These two figures alone demonstrate that the modules used "for storing" and

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[9] '389, 3:1-2, 8:9-12.

"for simultaneously retrieving for playback" indisputably can include hardware and/or software.

Cf. EchoStar Appeal, 516 F.3d at 1309 (noting that a combination of software and hardware may be used to perform certain functions and that "the hardware/software distinction made by EchoStar is unhelpful."). Verizon's proposed constructions are inconsistent with the intrinsic evidence and the ordinary meaning of "module."

V.   THE OVERSHOOT CORRECTION PATENT – U.S. PAT. NO. 7,493,015

A.   Overview of the Overshoot Correction Patent

The Overshoot Correction Patent relates to terminating fast forward or reverse progression through a program during playback. The patent recognizes that, without intervention, there may be some discrepancy between the position in the program where fast forward or rewind is actually terminated and the position where it should have terminated under optimal conditions. The discrepancy results from some amount of "overshoot" due to factors such as user reaction time and control delay. To account for this overshoot, the patent calculates a "new position in the program material to compensate for a difference between the current position [where the termination of fast forward or reverse progression occurred] and the user's expected termination point in the program material." '015, Cls. 1, 13, 17. The patent discloses numerous techniques to compensate for this difference. *See, e.g.,* '015, 20:19-21:5. The asserted claims use a calculation "based on a user-selected speed of the fast forward or reverse progression." '015, 20:51-58 & Cls. 3, 15, 19.

B.   The Overshoot Correction Patent terms are clear and do not require express construction.

Similar to its approach to the TimeWarp Patent, Verizon seeks construction of numerous terms in the Overshoot Correction Patent that are clear on their face. None of the disputed language needs further construction. Should the Court find construction necessary, it should reject Verizon's attempts to add new and unfounded limitations.

1.   "detecting current position in the program material where the termination occurred"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
detecting current position in the program material where the termination occurred	**No construction necessary**, alternatively, "determining the current position in the program material where the termination of the fast forward or the reverse progression occurred."	determining the point in the audio or video program where the user discontinued fast forward or reverse mode

This phrase is readily understood when read in the context of the claims, and it requires no construction. For example, as recited in claim 1 (from which claim 3 depends), following termination of a fast forward or reverse progression operation, the claim plainly states the step of "detecting current position in the program material where the termination occurred." '015, 23:48-49. There is no special scientific or technical meaning to this phrase, and no reason why a jury cannot understand and apply this language unencumbered by additional verbiage.

Regardless, Verizon urges the Court to rewrite the express language of the phrase to limit it to "determining the point . . . where *the user* discontinued fast forward or reverse mode." (emphasis added.) This is incorrect, as the plain language of the disputed phrase has nothing to do with determining the point where "the user discontinued" fast forward or reverse—the claim is drawn to detecting the current position in the program material where the termination actually occurred. The specification explicitly states that the "invention determines the position where the program material was stopped." '015, 2:18-19. In a preferred embodiment, this is done by the "Media Control 1501," which "sends the viewer interface 1503 the frame position where the program material was stopped" following the termination of fast forward or reverse progression. '015 Patent, 20:36-38. Verizon's proposed construction conflicts with the plain language of the claims and the description in the specification, and it should be rejected by this Court.

2.   "calculating . . . by adding . . . or subtracting"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
calculating	**No construction necessary**. The claim provides "calculating… by adding…or subtracting"	calculating… by adding…or subtracting

calculating a new position in the program material	**No construction necessary**. The claim provides "calculating a new position in the program material…by adding a positional offset to the current position when reverse mode has been terminated or subtracting a positional offset from the current position when fast forward mode has been terminated."	calculating a new position in the program material…by adding a positional offset to the current position when reverse mode has been terminated or subtracting a positional offset from the current position when fast forward mode has been terminated
calculating step	**No construction necessary.** The claim provides "calculating… by adding…or subtracting."	calculating… by adding…or subtracting
calculates the new position based on a user-selected speed of the fast forward or reverse progression	**No construction necessary**. The claim provides "calculating a new position…by adding…or subtracting a positional offset… based on a user-selected speed of the fast forward or reverse progression."	calculating a new position…by adding…or subtracting a positional offset… based on a user-selected speed of the fast forward or reverse progression

The claim term "calculating" likewise is straightforward and requires no construction. The claimed step of "calculating" is performed "by adding . . . or subtracting." These are "ordinary, simple English words whose meaning is clear and unquestionable" *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1373 (Fed. Cir. 2004). Without explanation, Verizon insists that the terms require construction, yet proposes a construction that muddles the clear meaning of the term "calculating" by redundantly adding the language "by adding . . . or subtracting." Fatal to Verizon's argument, this language already appears elsewhere in the claim. Again, claim construction "is not an obligatory exercise in redundancy." *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997).

3.   "user's expected termination point"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
user's expected termination point	Plain meaning	indefinite, unless construed as, the point in the audio or video program where the user's past corrections indicate the user intended to begin playback after discontinuing fast forward or reverse mode

The meaning of this phrase is plain on its face. Verizon's proposed construction should be rejected because it improperly limits the claims to one of several overshoot correction embodiments disclosed in the specification. In the single embodiment Verizon would choose, the system "adapts to the user by remembering how much the user corrects (i.e. reverses or fast forwards) after he stops the fast forward or reverse mode (in each speed)." '015, 20:43-45. But the

patent also discloses additional compensation methods not necessarily based on "the user's past corrections"—such as a method that "automatically subtracts or adds, respectively, a time multiple (depending upon the actual speed used for 1x, 2x, or 3x) to the frame where the transition was detected and positions the user at the correct frame." '015, 20:54-58. The requirement to further "adapt[] to the user's prior positional corrections" is added in dependent claims 2, 6, 10, 14, 18, and 22 and hence cannot be imported into their associated independent claims. *Innova / Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1123 (Fed. Cir. 2004) ("the doctrine of claim differentiation 'normally means that limitations stated in dependent claims are not to be read into the independent claim from which they depend.'" (*quoting Karlin Tech., Inc. v. Surgical Dynamics, Inc.,* 177 F.3d 968, 971-72 (Fed. Cir. 1999)).

4.   "adding" and "subtracting" a "positional offset"

Term	TiVo's Proposed Construction	Verizon's Proposed Construction
adding a positional offset to the current position when reverse mode has been terminated or subtracting a positional offset from the current position when fast forward mode has been terminated	**No construction necessary**, alternatively, "adding a value to the current position to compensate for the difference in position when reverse mode has been terminated or subtracting a value from the current position to compensate for the difference in position when fast forward mode has been terminated."	adding data that identifies the position of an individual video segment within the stream where playback mode should begin when reverse mode or fast forward mode has been terminated

The claim language in context makes clear what this phrase means. A jury can ably apply the terms "adding" and "subtracting." But Verizon's proposal unhelpfully replaces the terms "adding a positional offset" and "subtracting a positional offset" with "adding data that identifies the position of an individual video segment within the stream." The Court should reject Verizon's request to replace simple mathematical operations with complicated, quasi-technical language that appears nowhere in the claims and has no support.

Should the Court find construction appropriate to further clarify how the word "offset" relates to the difference between the claimed "current position" and the "user's expected termination point," the appropriate construction is "adding a value to the current position to

compensate for the difference in position when reverse mode has been terminated or subtracting a value from the current position to compensate for the difference in position when fast forward mode has been terminated." *See, e.g.,* Ex. 8, *American Heritage Dictionary* 1221 (defining "offset" as "[a]n agent, element, or thing that balances, counteracts, or compensates for something else."); *see also* Ex. 13, *IEEE Standard Dictionary* 711 ("[t]he difference between the value or condition desired and that actually attained."); Ex. 9, *Webster's Third* 1567 ("difference in value or direction").

C.   The inventors deliberately avoided means-plus-function claiming, and none of the proposed "module" terms are governed by 35 U.S.C. § 112 ¶ 6.

Verizon incorrectly argues that multiple uses of the term "module" in the '015 Patent should be construed as means-plus-function claims under 35 U.S.C. § 112 ¶ 6. Notably, none of the defendants in the *TiVo v. AT&T* case have taken this position. As a threshold matter, Verizon's argument should be rejected because Verizon has failed to even identify the allegedly claimed functions for each limitation. *See Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007) ("[T]he court must first identify the function of the limitation" before "identify[ing] the corresponding structure for that function."); *York Prods. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1574 (Fed. Cir. 1996) (§112, ¶ 6 cannot be invoked "[w]ithout an identified function"). As a result, TiVo is prejudiced because Verizon's claim construction contentions are unknown, and Verizon should not be permitted to provide them for the first time in its opposition brief.

Further, the phrase "means for" is absent from each of the claims. This creates a "strong" presumption against applying section 112, paragraph 6, that is "not readily overcome." *Lighting World, Inc. v. Birchwood Lighting, Inc.,* 382 F. 3d 1354, 1358 (Fed. Cir. 2004). Rather than relying on means-plus-function claiming under section 112, paragraph 6, the inventors recited specific modules, a well-recognized term in the computer-related arts that nearly every court—including

this one—has concluded "provides sufficient structure" to avoid the application of section 112, paragraph 6. *Beneficial Innovations, Inc. v. Blockdot, Inc.*, Nos. 2:07-CV-263, 2:07-CV-555, 2010 WL 1441779, *16 (E.D. Tex. April 12, 2010); *see also Roy-G-Biv Corp. v. FANUC, Ltd.*, No. 2:07-CV-418, 2009 WL 2971097, *28 (E.D. Tex. Aug. 25, 2009); *Stanacard, LLC v. Rebtel Networks, AB*, 680 F. Supp. 2d 483, 497-500 (S.D.N.Y. 2010); *PalmTop Productions, Inc. v. Lo-Q PLC*, 450 F. Supp. 2d 1344, 1365 (N.D. Ga. 2006).[10] Ultimately, Verizon seeks to rewrite the claims in means-plus-function form in order to create an invalidity argument by alleging there is no corresponding structure. This is improper.

The file history dispels any doubt about the inventors' intent. For each limitation at issue, the claims as originally filed were in means-plus-function form. During prosecution, however, the claims underwent several amendments, including eliminating the "means" language and replacing it with the recited modules. Ex. 14, p. 4-5. These amendments indicate that the inventors purposefully chose not to rely on section 112, paragraph 6. Verizon's proposed constructions would render these amendments meaningless, and its attempt to invalidate the patent would improperly read back into the claim the "means for" language that the inventors' deliberately avoided. Patent claims "should be so construed, if possible, as to sustain their validity." *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999). Verizon's unsupported rewriting of the claims should be rejected.

VI.   CONCLUSION

For the foregoing reasons, the Court should continue to apply its existing claims constructions and adopt TiVo's proposals for any additional terms found to require construction.

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[10] Notably, the phrase "a module for . . ." also appears in the Multiroom Patent, yet in that context Verizon agrees that the ordinary meaning of the term "module" conveys sufficient structure to avoid means-plus-function treatment. *See* Section IV.B.5, *supra*.

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who have consented to electronic service, Local Rule CV-5(a)(3)(A). Pursuant to FED. R. CIV. P. 5(d) and Local Rule CV-5(e), all other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of the foregoing by U.S. mail, on this February 17, 2011.

/s/ John F. Garvish, II